physical examination or on mammography or xerography, no operation is indicated on the opposite breast. If the opposite breast is large or if it is involved with some pathological process, the treatment may be carried out in various ways. Such techniques as subcutaneous mastectomy; simple mastectomy; and reduction mammoplasty have been used; however, a comprehensive discussion of the indications for the operation cannot be covered in an article of this type. Most plastic surgeons today do not use large flap procedures to reconstruct a breast since these leave large scars in other areas and the results are not the most cosmetically acceptable.

In summary, breast reconstruction following mastectomy is an acceptable procedure in properly selected candidates. After careful examination and selection, many women who in the past were forced to spend the rest of their lives with the physical and psychological deformity of a mastectomy may have this problem resolved by rconstructive surgical procedures.

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Newer Aspects of Microvascular Tissue Transfer

THE CLINICAL TRANSFER of tissue by microvascular techniques has become much more frequently used in the past few years. Free flaps of a number of different varieties have been transplanted from the chest to the face or extremities and from the groin to the extremities or head and neck areas. Bone grafts utilizing the ribs and the fibula have been used in microvascular surgical procedures to bridge unstable fractures of the extremities, thus providing good, prompt, boney union in difficult problems.

As with all new techniques, complications have developed in the transplantation of such tissues. These are reported to occur in from 10 to 30 percent of cases, depending upon the experience of those reporting.

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Surgical Procedures on Hands

CONTINUING DEVELOPMENT of microsurgical technique and instrumentation has permitted dramatic recent advances in surgical procedures on hands. Hand replantation should not, however, overshadow the increased emphasis on atraumatic technique, on the use of fine suture materials, and on the principles of wound healing.

From the first tentative laboratory work a decade ago, we now have sutures 18 to 22 micra in diameter, needles 50 to 70 micra in diameter and versatile quadrascopes that allow the suture of vessels 1 mm and less with a greater than 90 percent patency rate.

The replantation of amputated digits, hands, feet and upper extremities is now a well established operation. In many clinics there has been an 80 percent success rate, which reflects careful selection as well as superior techniques. Although the precise indications for replantation are still being developed, patients with amputations of multiple digits, thumbs, entire hands and upper extremities are candidates for replantation. The nature of the injury, age, general condition and occupation of the patient are important in the decision of whether to attempt replantation.

Physicians likely to see patients with amputations should become familiar with the care of the amputated part and the institutions and personnel with replantation capability. Not all amputations are suitable for replantation, but the referral should be made to a microvascular surgeon for evaluation.

Nerve repair and reconstruction has similarly benefited from the emphasis on the biologic aspects of wound healing. Scar tissue interposed between sutured nerve ends is the main deterrent to nerve regeneration. The two major contributors to scar tissue in a nerve repair are tension and crude technique. Millesi has made a significant contribution to peripheral nerve surgical procedures by emphasizing interfascicular nerve grafts. Multiple sections of donor nerve, usually the sural nerve, are sutured to individual fascicles of the injured nerve with 10-0 nylon using the operating microscope. This detailed placement of a nerve graft enhances the chances for the regenerating axon to grow into the collapsed Schwann sheaths. After 12 to 24 months, most denervated muscles are too fibrotic to become functional following renervation; however, the equally important sensibility can be reestablished